IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Lester F. LUDWIG Serial No.: 10/680,591 Filed: October 6, 2003 Title: GENERALIZED ELECTRONIC MUSIC INTERFACE Group Art Unit: 2837 Examiner: Marlon T. Fletcher Confirmation No. 5264 Attorney Docket No.: 92039-8727 [2152-3023]	Certificate of Transmission/Mailing I hereby certify that this correspondence is being facsimile transmitted to the USPTO, transmitted via the Office electronic filing system, or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below: March 31, 2008 /Jeffrey J. Lotspeich/ Date Jeffrey J. Lotspeich Registration No. 45,737 Attorney for Appellant

APPEAL BRIEF

Mail Stop Appeal Brief – Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

This brief is in furtherance of the Notice of Appeal filed January 31, 2008, and is submitted responsive to the third Office Action issued November 1, 2007. The time period for filing this Appeal Brief is two months from the January 31, 2008, filing date of the Notice Appeal. Payment via credit card for the statutory fee for an appeal brief in the amount of $255.00 is submitted herewith. Accordingly, Appellant submits the following:

TABLE OF CONTENTS

PAGE

I. REAL PARTIES IN INTEREST 3

II. RELATED APPEALS AND INTERFERENCES 4

III. STATUS OF CLAIMS 6

IV. STATUS OF AMENDMENTS 7

V. SUMMARY OF CLAIMED SUBJECT MATTER 8

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL 11

VII. ARGUMENT 12

CLAIMS APPENDIX 22

EVIDENCE APPENDIX 45

RELATED PROCEEDINGS APPENDIX 46

I. REAL PARTIES IN INTEREST

The real party in interest in this mater is the sole inventor, Lester F. Ludwig (hereinafter “Appellant”).

II. RELATED APPEALS AND INTERFERENCES

Currently, there are six other related appeals which have been filed. These appeals have been filed in the following applications:

Docket No.	App. Ser. No.:	App. filing date:	Appeal filed:
2152-3005	09/812,400	March 19, 2001	January 25, 2007
2152-3014	10/676,926	September 30, 2003	January 31, 2008
2152-3027	10/702,262	November 5, 2003	January 29, 2007* March 12, 2008
2152-3026	10/703,023	November 5, 2003	July 25, 2006
2152-3033	10/737,042	December 15, 2003	December 12, 2007
2152-3044	11/040,163	January 21, 2005	January 31, 2008

With regard to Ser. No. 10/702,262 (Atty. Doc. No. 2152-3027), the Examiner has recently reopened prosecution by issuing an Office Action on December 10, 2007. On review of this Office Action, it is believed that the Examiner has improperly reopened prosecution as being in violation of the requirements of MPEP § 1207.04 since, *inter alia*, the Examiner failed to obtain the necessary approval from his supervisory patent examiner.[1] Notwithstanding the improper reopening of prosecution in that case, since the Examiner has, in all relevant parts, simply reformulated the same rejections, Appellant has filed a second Notice of Appeal in the '262 application on March 12, 2008.

---

[1] The examiner may, with approval from the supervisory patent examiner, reopen prosecution to enter a new ground of rejection after appellant's brief or reply brief has been filed. MPEP 1207.04

Appellant notes further that there are approximately six additional pending applications containing substantially the same disclosure as the above-identified applications, and which are assigned to the same Examiner as the present application and the above-mentioned applications. Appellant anticipates that each of the six pending applications, which if rejected, will also require an appeal to the Board of Appeals and Interferences. Appellant will endeavor to update this section of the present Appeal Brief when necessary to reflect the current status of such related appeals.

III. STATUS OF CLAIMS

Claims 1-116 are pending in the application, claims 1-26, 53-69, 87-95, 105-109, and 115 having been withdrawn from consideration as a result of a restriction requirement, and claims 27-52, 70-86, 96-104, 110-114, and 116 having been elected for examination. Claims 27, 70, 96, 110, and 116 are the only independent claims. Claims 27-52, 70-86, 96-104, 110-114, and 116 stand rejected under 35 U.S.C. §102(a) as being anticipated by Ishigaki et al. (U.S. 6,271,455). Claim 33 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishigaki. A copy of the withdrawn and rejected claims appears in the Appendix of Claims on Appeal attached to the Appeal Brief.

IV. STATUS OF AMENDMENTS

No amendment has been filed subsequent to the third Office Action issued November 1, 2007.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Briefly, with regard to independent claim 27, aspects of the present claim provide for a method for interconnecting electronic musical instruments and signal processing systems (Pg. 16 lines 9-20; Figures 1-2). The method includes receiving instrument audio signals at an outgoing multi-channel audio interface such that the instrument audio signals include at least three independent audio signals generated by an external musical instrument (Pg. 18, lines 16-17; pg. 125, lines 8-10; Figures 50-57). The method also includes providing the instrument audio signals to an external signal processing system (Pg. 18, lines 5-8; Figures 1-2 and 50-57), and receiving MIDI control signals at an outgoing control interface, such that the MIDI control signals are generated by the external musical instrument (Pg. 18, lines 10-12; Figures 1-2). Another operation includes providing the MIDI control signals to the external signal processing system (Pg. 18, lines 5-8; Figures 1-2). Additional description may be found at, for example, pg. 122 line 7 through pg. 126 line 4.

With regard to independent claim 70, aspects of the present claim provide for a method for interconnecting electronic musical instruments and signal processing systems (pg. 16 lines 9-20; Figures 1-2). The method includes receiving instrument audio signals at an outgoing multi-channel audio interface such that instrument audio signals include at least three independent audio signals generated by an external musical instrument (Pg. 18, lines 16-17; pg. 125, lines 8-10; Figures 50-57). Other operations include providing the instrument audio signals to an external signal processing system (Pg. 18, lines 5-8; Figures 1-2 and 50-57), receiving incoming control signals at an incoming control interface such that the incoming control signals are generated by the external signal processing system (Pg. 18, lines 13-15; Figures 1-2), providing the incoming control signals to the external musical instrument, and receiving control signals at an outgoing control interface, such that the control signals are generated by the external musical instrument (Pg. 18, lines 10-12; Figure 1). The method additionally includes providing the control signals to the external signal processing system (Pg. 18, lines 5-8; Figures 1-2). Additional description may be found at, for example, pg. 122 line 7 through p. 126 line 4.

With regard to independent claim 96, aspects of the present claim provide for a method for interconnecting electronic musical instruments and signal processing systems (Pg. 16 lines 9-20; Figures 1-2). The method includes receiving instrument audio signals at an outgoing multi-channel audio interface, such that the instrument audio signals comprise at least three independent audio signals generated by an external musical instrument (Pg. 18, lines 16-17; pg. 125, lines 8-10; Figures 50-57), providing the instrument audio signals to an external signal processing system (Pg. 18, lines 5-8; Figures 1-2 and 50-57), and receiving a plurality of incoming audio signals at an incoming multi-channel audio interface such that the plurality of incoming audio signals are generated by the external signal processing system. Another operation includes providing the plurality of incoming audio signals to the external musical instrument (Pg. 18, lines 18-19; Figures 1-2 and 50-57). Additional description may be found at, for example, pg. 122 line 7 through pg. 126 line 4.

With regard to independent claim 110, aspects of the present claim provide for a method for interconnecting electronic music systems (Pg. 16 lines 9-20; Figures 1-2). The method includes receiving incoming MIDI control signals at an incoming MIDI control interface, such that the incoming MIDI control signals are generated by a first electronic music system (Pg. 18, lines 13-15; Figures 1-2), providing the incoming MIDI control signals to a second electronic music system (Pg. 18, lines 13-15; Figures 1-2), and receiving outgoing MIDI control signals at an outgoing MIDI control interface, such that the outgoing MIDI control signals are generated by the first electronic music system (Pg. 18, lines 10-12; Figures 1-2) and the incoming MIDI control interface and the outgoing MIDI control interface are integrated to utilize a common physical interface connector (Pg. 123 lines 6, 9-20, pg. 124 lines 1-6, 8-12). An additional operation includes providing the outgoing control signals to the second electronic music systems (Pg. 18, lines 10-12; Figure 2). Additional description may be found at, for example, pg. 122 line 7 through pg. 126 line 4.

With regard to independent claim 116, aspects of the present claim provide for a method for interconnecting electronic music systems (Pg. 16 lines 9-20; Figures 1-2) and includes receiving incoming MIDI control signals at an incoming MIDI control interface, such that the incoming MIDI control signals are generated by a first electronic music system (Pg. 18, lines 13-15; Figures 1-2), providing the incoming MIDI control signals to a second electronic music system using a wireless communication link (Pg. 18, lines 13-15; Figures 1-2), and receiving outgoing MIDI control signals at an outgoing MIDI control interface, such that the outgoing MIDI control signals are generated by the first electronic music system (Pg. 18, lines 10-12; Figures 1-2). Another operation includes providing the outgoing control signals to the second electronic music systems using the wireless communication link (Pg. 18, lines 10-12; pg. 123 lines 6-18; pg. 124 lines 12-19; Figure 2). Additional description may be found at, for example pg. 122 line 7 through pg. 126 line 4.

It is understood that the references to the specification and figures are submitted to aid the Board's understanding of the claims, and that such claims are not to be interpreted as being limited to only the embodiments disclosed at the identified locations.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 27-52, 70-86, 96-104, 110-114, and 116 stand rejected under 35 U.S.C. §102(a) as being anticipated by Ishigaki et al. (U.S. 6,271,455). Claim 33 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishigaki.

VII. ARGUMENT

A. Independent claim 27

Claims 27-52, 70-86, 96-104, 110-114, and 116 stand rejected under 35 U.S.C. §102(a) as being anticipated by Ishigaki et al. (U.S. 6,271,455).

With regard to claim 27, Appellant seeks review based on the following two points. First, Appellant has presented arguments identifying a number of elements recited in this claim which are simply missing from the cited Ishigaki reference. Each of these distinctions has been presented during prosecution and will also be described in detail below. The second error relates to the Examiner's failure to comply with MPEP 707.07(f) which requires that the Examiner ". . . take note of the applicant's argument and answer the substance of it." On this point, the Examiner has failed to address or even acknowledge the comments provided by Appellant in the responses filed in the present application. The various points made by Appellant during prosecution, to which the Examiner failed to address, are presented below in subheadings A.1 through A.3.

A.1 Ishigaki discloses different elements for audio and MIDI control signals

Claim 27 recites "audio signals generated by an external musical instrument," and "wherein said MIDI control signals are generated by said external musical instrument." Appellant emphasizes that both the audio signals and the MIDI control signals are generated by the same element; namely an external musical instrument.

The Examiner relies upon music piece source registering system 45 as generating the claimed "audio signal."[2] The Examiner further relies upon a completely different device, MIDI data forming apparatus 41, as purportedly generating the claimed "MIDI control signals."[3] Setout below is Fig. 2 of Ishigaki, which has been annotated to highlight elements 45 and 41, and which are relied upon by the Examiner in rejecting claim 27.

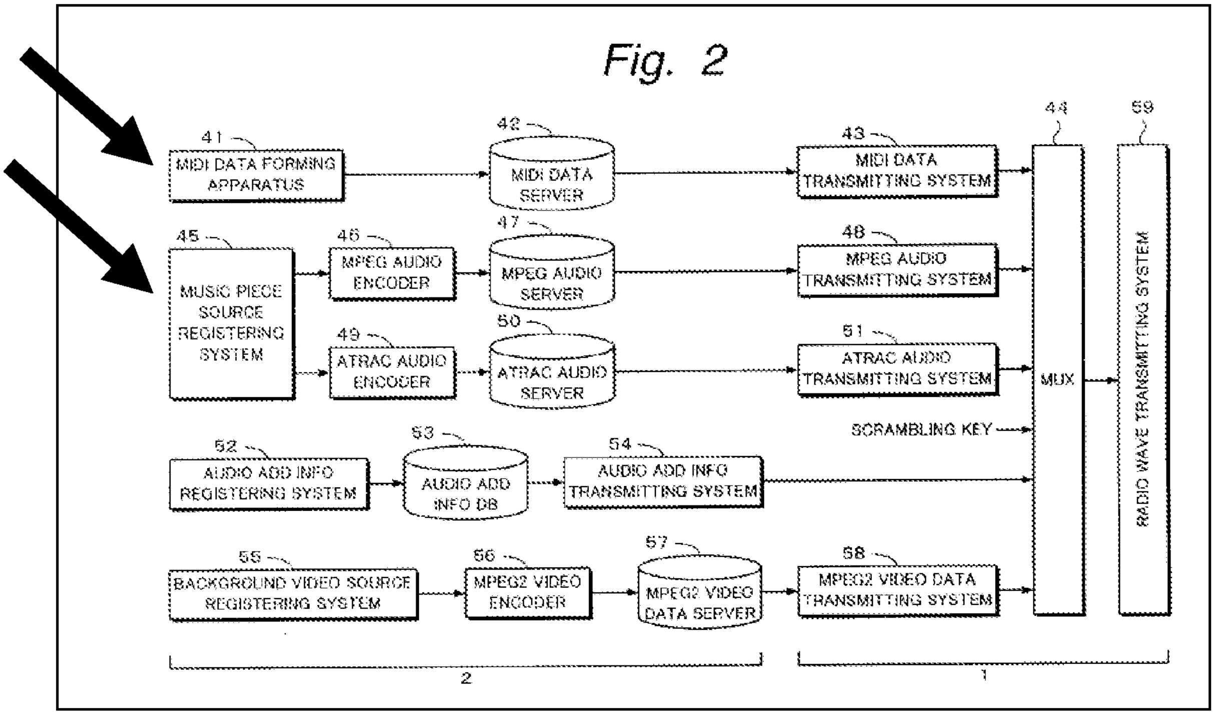


Fig. 2
41
MIDI DATA FORMING APPARATUS
42
MIDI DATA SERVER
43
MIDI DATA TRANSMITTING SYSTEM
44
59
45
MUSIC PIECE SOURCE REGISTERING SYSTEM
46
MPEG AUDIO ENCODER
47
MPEG AUDIO SERVER
48
MPEG AUDIO TRANSMITTING SYSTEM
49
ATRAC AUDIO ENCODER
50
ATRAC AUDIO SERVER
51
ATRAC AUDIO TRANSMITTING SYSTEM
MUX
RADIO WAVE TRANSMITTING SYSTEM
SCRAMBLING KEY
52
AUDIO ADD INFO REGISTERING SYSTEM
53
AUDIO ADD INFO DB
54
AUDIO ADD INFO TRANSMITTING SYSTEM
55
BACKGROUND VIDEO SOURCE REGISTERING SYSTEM
56
MPEG2 VIDEO ENCODER
57
MPEG2 VIDEO DATA SERVER
58
MPEG2 VIDEO DATA TRANSMITTING SYSTEM
2
1

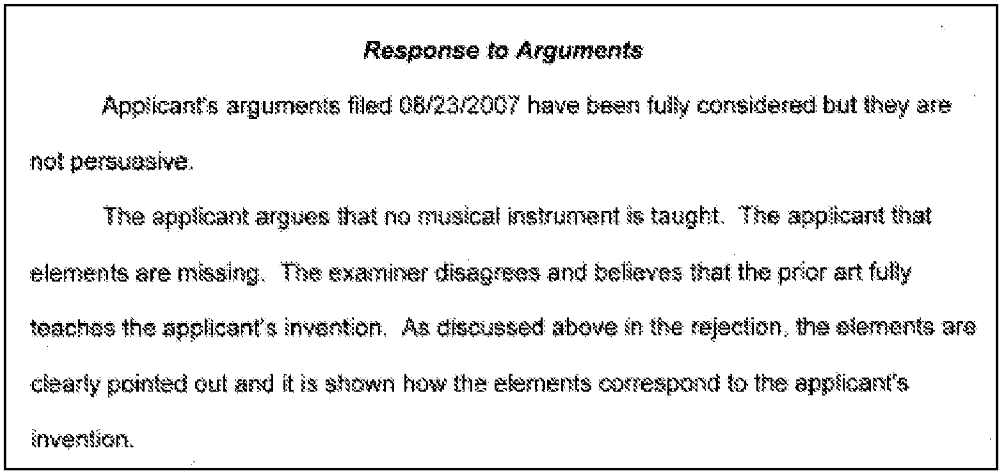
Fig. 2 of Ishigaki clearly shows that system 45 is separate and distinct from apparatus 41. Consequently, the so called audio signal and MIDI control signal of Ishigaki are at best generated by two different entities. This is completely different from the method recited in claim 1 which requires the audio signals and MIDI control signal to be generated by the same element (external musical instrument). This reason alone distinguishes claim 27 over Ishigaki.

---

[2] Office Action of 11/01/07, pg. 7.

[3] Office Action 11/01/07, pgs. 2 and 7.

Appellant submitted the forgoing comments to the Examiner, to which the Examiner failed to address in the subsequent Office Action in this case. In particular, the only comments by the Examiner to the Response of 8/23/07 are reproduced below:



Response to Arguments

Applicant's arguments filed 08/23/2007 have been fully considered but they are not persuasive.

The applicant argues that no musical instrument is taught. The applicant that elements are missing. The examiner disagrees and believes that the prior art fully teaches the applicant's invention. As discussed above in the rejection, the elements are clearly pointed out and it is shown how the elements correspond to the applicant's invention.

Conspicuously missing from such comments is any mention of the forgoing comments relating to the so called audio signal and MIDI control signal generation by Ishigaki.

In view of the forgoing, the so called audio signal and MIDI control signal of Ishigaki is generated by two different entities (i.e., apparatus 41 and system 45), and thus, is distinguishable from the method recited in claim 1 which requires the audio signals and MIDI control signal to be generated by the same element (external musical instrument). Again, the Examiner has never responded to such remarks.

A.2 Ishigaki does not teach "audio signals "

Claim 27 further recites "receiving instrument audio signals at an outgoing multi-channel audio interface, wherein said instrument audio signals comprise at least three independent audio signals generated by an external musical instrument."

The Examiner's position is that systems 48 and 51 teach the "audio signals" aspect of claim 27.[4] It is recognized that the Examiner has conceded that the MIDI control signal of system 43 does not provide an audio signal to the extent that such a rejection is no longer present in the latest Office Action. Appellant's comments will address Fig. 2 of the cited Ishigaki patent, and the Board's attention is invited to this figure as reproduced above.

As a first point, which has been made of record in both of the responses filed in this case, Appellant submits that neither system 48 nor system 51 provide "audio signals."[5] System 48 is described as packetizing MPEG audio data, and system 51 apparently provides packetized adaptive transform acoustic coding (ATRAC) data.[6] For the Examiner's assertions to be valid, both the MPEG audio data and the ATRAC data must each be interpreted as an "audio signal."

The Examiner apparently considers MPEG audio data and ATRAC data to disclose the claimed "audio signal." Such a position is inconsistent with what is well understood by one of ordinary skill in the art, and furthermore is inconsistent with the explicit teachings of Ishigaki.

---

[4] Office Action of 11/01/07, pg. 2.

[5] Response of 1/25/06, pgs. 5 and 6; Response of 8/23/07, pgs. 5-7.

[6] Ishigaki col. 5, lines 19-25.

Consider first the MPEG audio data provided by system 48. Ishigaki describes this MPEG audio data as being provided to receiver 60A.[7] The MPEG audio data is supplied to MPEG audio decoder 65 to produce decoded audio data.[8] Next, "the decoded audio data is converted into an analog audio signal by a D/A converter 65."[9] What this means is that the MPEG audio data provided by system 48 is not an audio signal. This is because the MPEG audio data provided by system 48 is later converted into an audio signal. If the MPEG audio data provided by system 48 was indeed an audio signal, as alleged by the Examiner, then there would be no need to later convert such data into an audio signal. Appellant provided this very comment in the last Response, but the Examiner failed to provide any remarks on this very compelling point.

Consider now the ATRAC data provided by system 51. Ishigaki describes this ATRAC data as being provided to receiver 60B.[10] The ATRAC data is supplied to the ATRAC audio decoder 90 to produce decoded audio data.[11] In a manner similar to the MPEG audio data, Ishigaki further describes processing relating to the decoded ATRAC data as: "the decoded audio data is converted into an analog audio signal by a D/A converter 65."[12] Since the ATRAC data provided by system 51 is later converted into an audio signal, such data cannot be an audio signal as the Examiner alleges. This point has also been made to the Examiner, for which the Examiner again failed to provide comments or even acknowledge this position.

---

[7] Ishigaki Fig. 3 and col. 5, lines 57-60.

[8] Ishigaki col. 6, lines 43-47.

[9] Ishigaki col. 6, lines 58-59 (emphasis added).

[10] Ishigaki Fig. 4, and col. 8, lines 51-17.

[11] Ishigaki col. 8, lines 33-38.

[12] Ishigaki col. 8, lines 39-40.

To conclude on this point, Appellant submits that one of ordinary skill in the art easily understands that MPEG audio data (e.g., data from system 48) and ATRAC data (e.g., data from system 51) are not "audio signals." Appellant further submits that Ishigaki makes the explicit distinction between audio signals and MPEG audio data and ATRAC data. Lastly, there is absolutely no support for the position set forth by the Examiner on this point.

In view of the foregoing, Appellant submits that it is a reversible error for the Examiner to maintain the rejection to independent claim 27 because of the clear deficiencies of the cited reference Ishigaki. The Examiner has never responded to any of the forgoing.

A.3 No outgoing interface is taught

Claim 27 further recites "receiving instrument audio signals at an outgoing multi-channel audio interface." The Examiner alleges that this feature is taught by the MUX 44 component of the digital satellite broadcasting equipment 1.[13] Appellant again invites the Board's attention to Fig. 2 of Ishigaki, which is provided above.

Fig. 2 shows MUX 44 multiplexing signaling from systems 43, 48, 51, and 58, and other data. Assuming *arguendo* that MUX 44 is an "interface," this component provides signaling to an internal component of digital satellite broadcasting equipment 1; namely, radio wave transmitting system 59. The important point here is that MUX 44 provides, at best, an internal interface. There is no teaching or suggestion that MUX 44 provides an outgoing interface, much less the claimed "outgoing multi-channel audio interface."

---

[13] Response Office Action of 11/1/07, pg. 2.

The Examiner provided no comment on this additional distinction provided by Appellant. This is particularly concerning since (1) Appellant provided these comments in the Response of 01/25/07 and the Response of 8/23/07; and (2) Appellant requested compliance with MPEP 707.07(f) in the Response of 8/23/07.

In view of the forgoing, Ishigaki fails to teach or suggest a number of features recited in independent claim 27, representing clear error with the position set forth by the Examiner. In addition, the Examiner's failure to comply with MPEP 707.07(f) represents further error for which Appellant seeks review.

B. Independent claims 70, 96, 110, and 116

Claims 27-52, 70-86, 96-104, 110-114, and 116 stand rejected under 35 U.S.C. §102(a) as being anticipated by Ishigaki et al. (U.S. 6,271,455).

With regard to claims 70, 96, 110, and 116, Appellant submits that the Examiner failed to provide any basis for the stated rejection to these claims. In particular, claim 70 is directed toward a method for interconnecting electronic musical instruments and signal processing systems and recites "control signals" on several occasions. In addition, independent claim 96 repeatedly recites an "external signal processing system." None of the three Office Actions indicate where such elements are found in the cited references.

The rejections to independent claims 110 and 116 are similarly deficient. Each of the three Office Actions is completely silent as to various features recited in these claims, including:

- "wherein said incoming MIDI control signals are generated by a first electronic music system;" or
- "providing said incoming MIDI control signals to a second electronic music system."

In both Responses submitted in the present application, Appellant noted that each of the multi-page rejections list the purported teachings of Ishigaki, but such rejections do not specifically identify the claim numbers in association with the wording of the rejection.[14] The rejection simply identifies the patent, without reference to any particular claim number, and states that the patent discloses a number of features. Appellant is unable to decipher the rejection, and cannot determine the basis of the rejection. Appellant expressed these deficiencies to the Examiner, to no avail. This has prevented Appellant an opportunity to identify the basis of the rejection as applied to a particular claim. The error for which Appellant seeks review is based upon the requirements of MPEP § 707, citing 37 CFR § 1.104(c)(2), which provides:

> "… When a reference is complex or shows or describes other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified."

Ishigaki is clearly a complex reference to the extent that it contains 13 separate figures and 18 columns of text. The stated rejection to these claims not only fails to identify the claim number being addressed in the body of the rejection , but also fails to identify the particular portion being relied upon to support the Examiner's position. In a number of cases, the Examiner simply refers to a particular figure (e.g., Figure 1) as providing teachings of several claim elements. Appellant looks forward to distinguishing the Ishigaki patent from the claims of the present application, but is unable to do so since the Examiner's position has not been established.

---

[14] Response of 1/25/07, pgs. 8 and 9, and Response of 8/23/07, pgs. 10 and 11.

The rejection fails to address two fundamental questions: (1) what claims are being rejected; and (2) how are such claims being rejected? Appellant submits that the Examiner has failed on both accounts with regard to independent claims 70, 96, 110 and 116. Appellant respectfully invites the Board's attention to the rejection set out on pages 3-6 of the Office Action of 11/1/07, which is the latest Office Action in this application. The rejection speaks for itself.

D. Claims currently in condition for allowance

Appellant has demonstrated a number of errors in the rejections to claim 27. To the extent that independent claims 70 and 96 have language similar to that of claim 27, it is believed that similar errors exist with regard to the rejections to these claims. Appellant has further demonstrated error with regard to the rejections to independent claims 70, 96, 110, and 116. Appellant therefore submits that the identified rejections are improper and that independent claims 27, 70, 96, 110, and 116 are allowable over the asserted references.

Appellant further submits that the rejected dependent claims are believed patentable at least by virtue of their respective dependency on the patentable independent claims. Appellant respectfully requests that the Board of Patent Appeals and Interferences reverse the decision rejecting the identified claims and direct the Examiner to pass the case to issue.

Respectfully submitted,

FITCH, EVEN, TABIN & FLANNERY

/Jeffrey J. Lotspeich/

Jeffrey J. Lotspeich
Registration No. 45,737
Attorney for Appellant

Date: March 31, 2008

Address all correspondence to:
FITCH, EVEN, TABIN & FLANNERY
120 So. LaSalle Street, Ste. 1600
Chicago, IL 60603

Direct telephone inquiries to:
Jeffrey J. Lotspeich
(858) 587-7652
San Diego, California Office of
FITCH, EVEN, TABIN & FLANNERY

CLAIMS APPENDIX

1. (Withdrawn) A generalized interface for interconnecting electronic musical instruments and signal processing systems, said generalized interface comprising:

an outgoing multi-channel audio interface for receiving instrument audio signals comprising at least three independent audio signals generated by an external musical instrument, wherein said outgoing multi-channel audio interface provides said instrument audio signals to an external signal processing system; and

an outgoing control interface for receiving MIDI control signals generated by said external musical instrument, said outgoing control interface providing said MIDI control signals to said external signal processing system.

2. (Withdrawn) The interface according to claim 1, wherein said outgoing multi-channel audio interface and said outgoing control interface are integrated to utilize a common physical interface connector.

3. (Withdrawn) The interface according to claim 1, wherein said outgoing multi-channel audio interface and said outgoing control interface utilize a plurality of physical interface connectors.

4. (Withdrawn) The interface according to claim 1, wherein said instrument audio signals and said MIDI control signals are multiplexed to form a common multiplexed signal that is provided to said external signal processing system.

5. (Withdrawn) The interface according to claim 4, wherein said common multiplexed signal is provided to said external signal processing system using a wireless communication link.

6. (Withdrawn) The interface according to claim 4, wherein said outgoing multi-channel audio interface and said outgoing control interface are integrated to utilize a

common physical interface connector, and wherein

said common multiplexed signal is provided to said external signal processing system using said common physical interface connector.

7. (Withdrawn) The interface according to claim 4, wherein said common multiplexed signal is provided to said external signal processing system using an optical communication link.

8. (Withdrawn) The interface according to claim 1, said interface further comprising:

an incoming control interface for receiving incoming control signals generated by said external signal processing system, said incoming control interface providing said incoming control signals to said external musical instrument.

9. (Withdrawn) The interface according to claim 8, wherein said incoming control signals comprise signals of MIDI format.

10. (Withdrawn) The interface according to claim 1, said interface further comprising:

an incoming multi-channel audio interface for receiving a plurality of incoming audio signals generated by said external signal processing system, said incoming plurality of multi-channel audio interface providing said incoming audio signals to said external musical instrument.

11. (Withdrawn) The interface according to claim 1, said interface further comprising:

an outgoing control interface for receiving non-MIDI control signals generated by said external musical instrument, said outgoing control interface providing said non-MIDI control signals to said external signal processing system.

12. (Withdrawn) The interface according to claim 1, said interface further comprising:

a low-power interface for receiving electrical power provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, wherein said electrical power is adapted to provide power to an audio subsystem integrated with said external musical instrument.

13. (Withdrawn) The interface according to claim 1, said interface further comprising:

a low-power interface for receiving electrical power provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, wherein said electrical power is adapted to provide power to a control subsystem integrated with said external musical instrument.

14. (Withdrawn) The interface according to claim 1, said interface further comprising:

a low-power interface for receiving electrical power provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, wherein said electrical power is adapted to provide power to an audio subsystem and a control subsystem integrated with said external musical instrument.

15. (Withdrawn) The interface according to claim 1, said interface further comprising:

a moderate-power interface for receiving moderate-load electrical power provided by said external signal processing system, said moderate-power interface providing said moderate-load electrical power to said external musical instrument, wherein said moderate-load electrical power is adapted to provide power to auxiliary systems associated with said external musical instrument.

16. (Withdrawn) The interface according to claim 15, wherein said moderate-load electrical power provided by said moderate-power interface is adapted to provide power to controllable lighting devices associated with said external musical instrument.

17. (Withdrawn) The interface according to claim 15, wherein said moderate-load electrical power provided by said moderate-power interface is adapted to provide power to a video device associated with said external musical instrument.

18. (Withdrawn) The interface according to claim 1, said interface further comprising:

an outgoing video interface for receiving outgoing video signals generated by said external musical instrument, said outgoing video interface providing said outgoing video signals to said external signal processing system.

19. (Withdrawn) The interface according to claim 1, said interface further comprising:

an incoming video interface for receiving incoming video signals generated by said external signal processing system, said incoming video interface providing said incoming video signals to said external musical instrument.

20. (Withdrawn) The interface according claim 2, wherein said common physical connector is attached to one end of a cable for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external signal processing system.

21. (Withdrawn) The interface according claim 2, wherein said common physical connector is attached to one end of a cable for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external musical instrument.

22. (Withdrawn) The interface according claim 2, wherein said common physical connector is for mating with a connector integrated with said external musical instrument.

23. (Withdrawn) The interface according claim 2, wherein said common physical connector is for mating with a connector integrated with said external signal processing system.

24. (Withdrawn) The interface according claim 2, wherein said common physical connector is attached to one end of a cable assembly for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external musical instrument.

25. (Withdrawn) The interface according claim 3, wherein at least one physical interface connector of said plurality of physical interface connectors is configured to mate with a connector integrated with said external musical instrument.

26. (Withdrawn) The interface according to claim 3, wherein at least one physical interface connector of said plurality of physical interface connectors is configured to mate with a connector integrated with said external signal processing system.

27. (Rejected) A method for interconnecting electronic musical instruments and signal processing systems, said method comprising:

receiving instrument audio signals at an outgoing multi-channel audio interface, wherein said instrument audio signals comprise at least three independent audio signals generated by an external musical instrument;

providing said instrument audio signals to an external signal processing system;

receiving MIDI control signals at an outgoing control interface, wherein said MIDI control signals are generated by said external musical instrument; and providing said MIDI control signals to said external signal processing system.

28. (Rejected) The method according to claim 27, wherein said outgoing multi-channel audio interface and said outgoing control interface are integrated to utilize a common physical interface connector.

29. (Rejected) The method according to claim 27, wherein said outgoing multi-channel audio interface and said outgoing control interface utilize a plurality of physical interface connectors.

30. (Rejected) The method according to claim 27, wherein said instrument audio signals and said MIDI control signals are multiplexed to form a common multiplexed signal that is provided to said external signal processing system.

31. (Rejected) The method according to claim 30, wherein said common multiplexed signal is provided to said external signal processing system using a wireless communication link.

32. (Rejected) The method according to claim 30, wherein said outgoing multi-channel audio interface and said outgoing control interface are integrated to utilize a common physical interface connector, and wherein

said common multiplexed signal is provided to said external signal processing system using said common physical interface connector.

33. (Rejected) The method according to claim 30, wherein said common multiplexed signal is provided to said external signal processing system using an optical communication link.

34. (Rejected) The method according to claim 27, said method further comprising:

receiving incoming control signals at an incoming control interface, wherein said incoming control signals are generated by said external signal processing system, said incoming control interface providing said incoming control signals to said external musical instrument.

35. (Rejected) The method according to claim 34, wherein said incoming control signals comprise signals of MIDI format.

36. (Rejected) The method according to claim 27, said method further comprising:

receiving a plurality of incoming audio signals at an incoming multi-channel audio interface, wherein said plurality of incoming audio signals are generated by said external signal processing system, said incoming multi-channel audio interface providing said plurality of incoming audio signals to said external musical instrument.

37. (Rejected) The method according to claim 27, said method further comprising:

receiving non-MIDI control signals at an outgoing control interface, wherein said non-MIDI control signals are generated by said external musical instrument, said outgoing control interface providing said non-MIDI control signals to said external signal processing system.

38. (Rejected) The method according to claim 27, said method further comprising:

receiving electrical power at a low-power interface, wherein said electrical power is provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, and wherein said electrical power is adapted to provide power to an audio subsystem integrated with said external musical instrument.

39. (Rejected) The method according to claim 27, said method further comprising:

receiving electrical power at a low-power interface, wherein said electrical power is provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, and wherein said electrical power is adapted to provide power to a control subsystem integrated with said external musical instrument.

40. (Rejected) The method according to claim 27, said method further comprising:

receiving electrical power at a low-power interface, wherein said electrical power is provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, and wherein said electrical power is adapted to provide power to an audio subsystem and a control subsystem integrated with said external musical instrument.

41. (Rejected) The method according to claim 27, said method further comprising:

receiving moderate-load electrical power at a moderate-power interface, wherein said moderate-load electrical power is provided by said external signal processing system, said moderate-power interface providing said moderate-load electrical power to said external musical instrument, and wherein said moderate-load electrical power is adapted to provide power to auxiliary systems associated with said external musical instrument.

42. (Rejected) The method according to claim 41, wherein said moderate-load

electrical power provided by said moderate-power interface is adapted to provide power to controllable lighting devices associated with said external musical instrument.

43. (Rejected) The method according to claim 41, wherein said moderate-load electrical power provided by said moderate-power interface is adapted to provide power to a video device associated with said external musical instrument.

44. (Rejected) The method according to claim 27, said method further comprising:

receiving outgoing video signals at an outgoing video interface, wherein said outgoing video signals are generated by said external musical instrument, said outgoing video interface providing said outgoing video signals to said external signal processing system.

45. (Rejected) The method according to claim 27, said method further comprising:

receiving incoming video signals at an incoming video interface, wherein said incoming video signals are generated by said external signal processing system, said incoming video interface providing said incoming video signals to said external musical instrument.

46. (Rejected) The method according claim 28, wherein said common physical connector is attached to one end of a cable for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external signal processing system.

47. (Rejected) The method according claim 28, wherein said common physical connector is attached to one end of a cable for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external musical instrument.

48. (Rejected) The method according claim 28, wherein said common physical connector for mating with a connector integrated with said external musical instrument.

49. (Rejected) The method according claim 28, wherein said common physical connector for mating with a connector integrated with said external signal processing system.

50. (Rejected) The method according claim 28, wherein said common physical connector is attached to one end of a cable assembly for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external musical instrument.

51. (Rejected) The method according claim 29, wherein at least one physical interface connector of said plurality of physical interface connectors is configured to mate with a connector integrated with said external musical instrument.

52. (Rejected) The method according to claim 29, wherein at least one physical interface connector of said plurality of physical interface connectors is configured to mate with a connector integrated with said external signal processing system.

53. (Withdrawn) A generalized interface for interconnecting electronic musical instruments and signal processing systems, said generalized interface comprising:

an outgoing multi-channel audio interface for receiving instrument audio signals comprising at least three independent audio signals generated by an external musical instrument, wherein said outgoing multi-channel audio interface provides said instrument audio signals to an external signal processing system;

an incoming control interface for receiving incoming control signals generated by said external signal processing system, said incoming control interface providing said incoming control signals to said external musical instrument; and

an outgoing control interface for receiving control signals generated by said external musical instrument, said outgoing control interface providing said control signals to said external signal processing system.

54. (Withdrawn) The interface according to claim 53, wherein said outgoing multi-channel audio interface and said outgoing control interface are integrated to utilize a common physical interface connector.

55. (Withdrawn) The interface according to claim 53, wherein said outgoing multi-channel audio interface and said outgoing control interface utilize a plurality of physical interface connectors.

56. (Withdrawn) The interface according to claim 53, wherein said incoming control signals comprise signals of MIDI format.

57. (Withdrawn) The interface according to claim 53, said interface further comprising:

an incoming multi-channel audio interface for receiving a plurality of incoming audio signals generated by said external signal processing system, said incoming multi-channel audio interface providing said plurality of incoming audio signals to said external musical instrument.

58. (Withdrawn) The interface according to claim 53, said interface further comprising:

a low-power interface for receiving electrical power provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, wherein said electrical power is adapted to provide power to an audio subsystem integrated with said external musical instrument.

59. (Withdrawn) The interface according to claim 53, said interface further comprising:

a low-power interface for receiving electrical power provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, wherein said electrical power is adapted to provide power to a control subsystem integrated with said external musical instrument.

60. (Withdrawn) The interface according to claim 53, said interface further comprising:

a moderate-power interface for receiving moderate-load electrical power provided by said external signal processing system, said moderate-power interface providing said moderate-load electrical power to said external musical instrument, wherein said moderate-load electrical power is adapted to provide power to auxiliary systems associated with said external musical instrument.

61. (Withdrawn) The interface according to claim 53, said interface further comprising:

an outgoing video interface for receiving outgoing video signals generated by said external musical instrument, said outgoing video interface providing said outgoing video signals to said external signal processing system.

62. (Withdrawn) The interface according to claim 53, said interface further comprising:

an incoming video interface for receiving incoming video signals generated by said external signal processing system, said incoming video interface providing said incoming video signals to said external musical instrument.

63. (Withdrawn) The interface according claim 54, wherein said common physical connector is attached to one end of a cable for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external signal processing system.

64. (Withdrawn) The interface according claim 54, wherein said common physical connector is attached to one end of a cable for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external musical instrument.

65. (Withdrawn) The interface according claim 54, wherein said common physical connector is for mating with a connector integrated with said external musical instrument.

66. (Withdrawn) The interface according claim 54, wherein said common physical connector is for mating with a connector integrated with said external signal processing system.

67. (Withdrawn) The interface according claim 54, wherein said common physical connector is attached to one end of a cable assembly for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external musical instrument.

68. (Withdrawn) The interface according claim 55, wherein at least one physical interface connector of said plurality of physical interface connectors is configured to mate with a connector integrated with said external musical instrument.

69. (Withdrawn) The interface according to claim 55, wherein at least one physical interface connector of said plurality of physical interface connectors is configured to mate with a connector integrated with said external signal processing system.

70. (Rejected) A method for interconnecting electronic musical instruments and signal processing systems, said method comprising:

receiving instrument audio signals at an outgoing multi-channel audio interface, wherein said instrument audio signals comprise at least three independent audio signals generated by an external musical instrument;

providing said instrument audio signals to an external signal processing system;

receiving incoming control signals at an incoming control interface, wherein said incoming control signals are generated by said external signal processing system;

providing said incoming control signals to said external musical instrument;

receiving control signals at an outgoing control interface, wherein said control signals are generated by said external musical instrument; and

providing said control signals to said external signal processing system.

71. (Rejected) The method according to claim 70, wherein said outgoing multi-channel audio interface and said outgoing control interface are integrated to utilize a common physical interface connector.

72. (Rejected) The method according to claim 70, wherein said outgoing multi-channel audio interface and said outgoing control interface utilize a plurality of physical interface connectors.

73. (Rejected) The method according to claim 70, wherein said incoming control signals comprise signals of MIDI format.

74. (Rejected) The method according to claim 70, said method further comprising:

receiving a plurality of incoming audio signals at an incoming multi-channel audio interface, wherein said plurality of incoming audio signals are generated by said external signal processing system, and wherein said incoming multi-channel audio interface provides said plurality of incoming audio signals to said external musical instrument.

75. (Rejected) The method according to claim 70, said method further comprising:

receiving electrical power at a low-power interface, wherein said electrical power is provided by said external signal processing system, wherein said low-power interface provides said electrical power to said external musical instrument, and wherein said electrical power is adapted to provide power to an audio subsystem integrated with said external musical instrument.

76. (Rejected) The method according to claim 70, said method further comprising:

receiving electrical power at a low-power interface, wherein said electrical power is provided by said external signal processing system, wherein said low-power interface provides said electrical power to said external musical instrument, and wherein said electrical power is adapted to provide power to a control subsystem integrated with said external musical instrument.

77. (Rejected) The method according to claim 70, said method further comprising:

receiving moderate-load electrical power at a moderate-power interface, wherein said moderate-load electrical power is provided by said external signal processing system, wherein said moderate-power interface provides said moderate-load electrical power to said external musical instrument, and wherein said moderate-load electrical power is adapted to provide power to auxiliary systems associated with said external musical instrument.

78. (Rejected) The method according to claim 70, said method further comprising:

receiving outgoing video signals at an outgoing video interface, wherein said outgoing video signals are generated by said external musical instrument, and wherein said outgoing video interface provides said outgoing video signals to said external signal processing system.

79. (Rejected) The method according to claim 70, said method further

comprising:

receiving incoming video signals at an incoming video interface, wherein said incoming video signals are generated by said external signal processing system, wherein said incoming video interface provides said incoming video signals to said external musical instrument.

80. (Rejected) The method according claim 71, wherein said common physical connector is attached to one end of a cable for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external signal processing system.

81. (Rejected) The method according claim 71, wherein said common physical connector is attached to one end of a cable for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external musical instrument.

82. (Rejected) The method according claim 71, wherein said common physical connector is for mating with a connector integrated with said external musical instrument.

83. (Rejected) The method according claim 71, wherein said common physical connector is for mating with a connector integrated with said external signal processing system.

84. (Rejected) The method according claim 71, wherein said common physical connector is attached to one end of a cable assembly for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external musical instrument.

85. (Rejected) The method according claim 72, wherein at least one physical interface connector of said plurality of physical interface connectors is configured to mate with a connector integrated with said external musical instrument.

86. (Rejected) The method according to claim 72, wherein at least one physical interface connector of said plurality of physical interface connectors is configured to mate with a connector integrated with said external signal processing system.

87. (Withdrawn) A generalized interface for interconnecting electronic musical instruments and signal processing systems, said generalized interface comprising:

an outgoing multi-channel audio interface for receiving instrument audio signals comprising at least three independent audio signals generated by an external musical instrument, wherein said outgoing multi-channel audio interface provides said instrument audio signals to an external signal processing system; and

an incoming multi-channel audio interface for receiving a plurality of incoming audio signals generated by said external signal processing system, said incoming multi-channel audio interface providing said plurality of incoming audio signals to said external musical instrument.

88. (Withdrawn) The interface according to claim 87, wherein said outgoing multi-channel audio interface and said incoming multi-channel audio interface are integrated to utilize a common physical interface connector.

89. (Withdrawn) The interface according to claim 87, wherein said outgoing multi-channel audio interface and said incoming multi-channel audio interface utilize a plurality of physical interface connectors.

90. (Withdrawn) The interface according to claim 87, said interface further comprising:

a wireless communication link for providing said instrument audio signals to said external signal processing system and said plurality of incoming audio signals to said external musical instrument.

91. (Withdrawn) The interface according to claim 87, said interface further comprising: an incoming control interface for receiving incoming control signals generated by said external signal processing system, said incoming control interface providing said incoming control signals to said external musical instrument.

92. (Withdrawn) The interface according to claim 91, wherein said incoming control signals comprise signals of MIDI format.

93. (Withdrawn) The interface according to claim 87, said interface further comprising:

a low-power interface for receiving electrical power provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, wherein said electrical power is adapted to provide power to an audio subsystem integrated with said external musical instrument.

94. (Withdrawn) The interface according to claim 87, said interface further comprising:

a moderate-power interface for receiving moderate-load electrical power provided by said external signal processing system, said moderate-power interface providing said moderate-load electrical power to said external musical instrument, wherein said moderate-load electrical power is adapted to provide power to auxiliary systems associated with said external musical instrument.

95. (Withdrawn) The interface according to claim 87, said interface further comprising:

an outgoing video interface for receiving outgoing video signals generated by said external musical instrument, said outgoing video interface providing said outgoing video signals to said external signal processing system.

96. (Rejected) A method for interconnecting electronic musical instruments

and signal processing systems, said method comprising:

receiving instrument audio signals at an outgoing multi-channel audio interface, wherein said instrument audio signals comprise at least three independent audio signals generated by an external musical instrument;

providing said instrument audio signals to an external signal processing system;

receiving a plurality of incoming audio signals at an incoming multi-channel audio interface, wherein said plurality of incoming audio signals are generated by said external signal processing system; and providing said plurality of incoming audio signals to said external musical instrument.

97. (Rejected) The method according to claim 96, wherein said outgoing multi-channel audio interface and said incoming multi-channel audio interface are integrated to utilize a common physical interface connector.

98. (Rejected) The method according to claim 96, wherein said outgoing multi-channel audio interface and said incoming multi-channel audio interface utilize a plurality of physical interface connectors.

99. (Rejected) The method according to claim 96, said method further comprising:

providing said instrument audio signals to said external signal processing system and said plurality of incoming audio signals to said external musical instrument using a wireless communication link.

100. (Rejected) The method according to claim 96, said method further comprising:

receiving incoming control signals at an incoming control interface, wherein said incoming control signals are generated by said external signal processing system, and wherein said incoming control interface provides said incoming control signals to said external musical instrument.

101. (Rejected) The method according to claim 100, wherein said incoming control signals comprise signals of MIDI format.

102. (Rejected) The method according to claim 96, said method further comprising:

receiving electrical power at a low-power interface, wherein said electrical power is provided by said external signal processing system, wherein said low-power interface provides said electrical power to said external musical instrument, and wherein said electrical power is adapted to provide power to an audio subsystem integrated with said external musical instrument.

103. (Rejected) The method according to claim 96, said interface further comprising:

receiving moderate-load electrical power at a moderate-power interface, wherein said moderate-load electrical power is provided by said external signal processing system, wherein said moderate-power interface provides said moderate-load electrical power to said external musical instrument, and wherein said moderate-load electrical power is adapted to provide power to auxiliary systems associated with said external musical instrument.

104. (Rejected) The method according to claim 96, said method further comprising:

receiving outgoing video signals at an outgoing video interface, wherein said outgoing video signals are generated by said external musical instrument, and wherein said outgoing video interface provides said outgoing video signals to said external signal processing system.

105. (Withdrawn) A generalized interface for interconnecting electronic music systems, said generalized interface comprising:

an incoming MIDI control interface for receiving incoming MIDI control signals generated by a first electronic music system, said incoming MIDI control interface providing said incoming MIDI control signals to a second electronic music system; and

an outgoing MIDI control interface for receiving outgoing MIDI control signals generated by said first electronic music system, said outgoing MIDI control interface providing said outgoing control signals to said second electronic music systems, wherein said incoming MIDI control interface and said outgoing MIDI control interface are integrated to utilize a common physical interface connector.

106. (Withdrawn) The interface according to claim 105, wherein said common physical interface connector is attached to one end of a cable.

107. (Withdrawn) The interface according claim 105, wherein said common physical interface connector mates with a connector integrated with said first electronic music system.

108. (Withdrawn) The interface according claim 107, wherein said common physical interface connector mates with a connector integrated with said second electronic music systems.

109. (Withdrawn) The interface according to claim 105, said interface further comprising: a low-power interface for receiving electrical power provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, wherein said electrical power is adapted to provide power to a control subsystem integrated with said external musical instrument.

110. (Rejected) A method for interconnecting electronic music systems, said method comprising:

receiving incoming MIDI control signals at an incoming MIDI control interface, wherein said incoming MIDI control signals are generated by a first electronic music system;

providing said incoming MIDI control signals to a second electronic music system;

receiving outgoing MIDI control signals at an outgoing MIDI control interface, wherein said outgoing MIDI control signals are generated by said first electronic music system, and wherein said incoming MIDI control interface and said outgoing MIDI control interface are integrated to utilize a common physical interface connector; and

providing said outgoing control signals to said second electronic music systems.

111. (Rejected) The method according to claim 110, wherein said common physical interface connector is attached to one end of a cable.

112. (Rejected) The method according claim 110, wherein said common physical interface connector mates with a connector integrated with said first electronic music system.

113. (Rejected) The method according claim 112, wherein said common physical interface connector mates with a connector integrated with said second electronic music systems.

114. (Rejected) The method according to claim 110, said method further comprising:

receiving electrical power provided at a low-power interface, wherein said electrical power is provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, wherein said electrical power is adapted to provide power to a control subsystem integrated with said external musical instrument.

115. (Withdrawn) A generalized interface for interconnecting electronic music systems, said generalized interface comprising:

an incoming MIDI control interface for receiving incoming MIDI control signals generated by a first electronic music system, said incoming MIDI control interface providing said incoming MIDI control signals to a second electronic music system using a wireless communication link; and

an outgoing MIDI control interface for receiving outgoing MIDI control signals generated by said first electronic music system, said outgoing MIDI control interface providing said outgoing control signals to said second electronic music system using said wireless communication link.

116. (Rejected) A method for interconnecting electronic music systems, said method comprising:

receiving incoming MIDI control signals at an incoming MIDI control interface, wherein said incoming MIDI control signals are generated by a first electronic music system;

providing said incoming MIDI control signals to a second electronic music system using a wireless communication link;

receiving outgoing MIDI control signals at an outgoing MIDI control interface, wherein said outgoing MIDI control signals are generated by said first electronic music system; and

providing said outgoing control signals to said second electronic music systems using said wireless communication link.

EVIDENCE APPENDIX

No evidence is being entered or relied upon in this Appeal.

RELATED PROCEEDINGS APPENDIX

There has been no Board decision for any of the applications identified in the Related Appeals section of this Appeal Brief.